

REMARKS

I. Introduction

With this amendment, claims 1, 5, 6, and 26 - 31 are pending. The Examiner withdrew claim 25 as being to a non-elected species. Of the claims pending, claims 1 and 26 are the independent claims.

II. All Of The Rejections Are Based Upon Anticipation Or Alternatively Obviousness Rejections

The Examiner rejected claims 1, 5 and 6 as anticipated, or in the alternative obvious based upon seventeen references (not listed here).

The Examiner withdrew claim 25 as a non-elected claim. Applicant respectfully requests the Examiner to reconsider this action.

III. The Problem Solved By Applicant

This application describes a pulverulent building material composition which has a delayed action and comprises a reactive support material and a liquid polymer compound applied to the support material. This composition, which can comprise preferably (latently) hydraulic binders as support material, inorganic additives and/or organic compounds and also, as polymer compound, for example, polyvinyl alcohols, polyvinyl acetates and polymers based on AMPS, makes it possible to achieve time-delayed setting-free of the support material in the building chemical mixture which has been made up with water as a result of the time-dependent detachment of the polymer component from the support material. It has been surprisingly found that a controlled curing over time of hydratable building material mixtures occurs when using this pulverulent building material composition and a controlled "internal drying" over time of building materials based on aqueous dispersions is also possible.

The controlled curing occurs as a result of the detachment of the polymer compound from the support material by mechanical action and/or the action of a solvent, with water being particularly preferred as solvent in the latter case.

IV. The References Do Not Describe A Coated Pulverulent Material Which Can Be Sieved.

Merriam-Webster's online dictionary defines a pulverulent as follows:

"pul-ver-u-lent

Pronunciation: \pəl-'ver-yə-lənt, -'ver-ə-\

Function: *adjective*

Etymology: Latin *pulverulentus* dusty, from *pulver-*, *pulvis*

Date: circa 1656

1 : consisting of or reducible to fine powder

2 : being or looking dusty : **CRUMBLY**"

No reference describes such a coated pulverulent material. Each of the references will be discussed in detail below.

Beckenhauer (US 6,110,270)

Beckenhauer describes aqueous dispersions of cement. In this connection he describes a method for influencing moisture content and migration in building materials. According to Beckenhauer, a movement of moisture can be achieved in a porous building material. In order to achieve this moisture movement, the building material may be mixed with polyvinyl alcohol, or polyvinyl alcohol be incorporated into the building material along with other dry ingredients (polyvinyl alcohol is a solid) which then are mixed with water to hydrate the cement. According to Beckenhauer, the control of moisture movement may be obtained due to the compounds described in the application. This control purportedly leads to improved bonding with adjacent building material (see abstract). However, Beckenhauer does not describe a pulverulent composition which comprises a reactive support material

and a liquid polymer compound coated thereon. Moreover, Beckenhauer never hinted of the problem solved by applicant and never describes a pulverulent building material composition having a delayed curing action.

Butler et al. (US 5,766,323)

Butler et al. do not describe coating a particulate with a liquid coating to coat a reactive substrate. Rather, Butler et al. describe a cementitious building material in powder form comprising cement and a granulated hydrophic additive. This additive comprises an organopolysiloxane component, a water-soluble or water-dispersible binder and carrier particles. see col. 2, lines 1 - 5).

Butler et al. give a long list of suitable compounds for carrier particles, including starch, methyl cellulose and others. The term "cement" is included in this list without giving any further definition thereof. The cementitious material described by Butler displays a good hydrophobicity (see Abstract, last sentence), since a granulated hydrophobic additive is added.

Butler et al. do not even hint of providing a delayed action and even less to a possible delayed curing action. Particularly, Butler et al. fail to describe that a reactive support material is coated or encapsulated by a liquid polymer compound. Further, the carrier particles in the hydrophobing additive are not described as reactive carrier material.

Childs et al. (US 4,676,832)

Childs et al. do not refer to the application of polyvinyl alcohol to a carrier material, such as Portland cement. Childs et al. describe polyvinyl alcohol being added to a cement slurry to minimize settling of solids and separation of water of the solids (see col. 6, I. 60-62).

Childs et al. describe cement compositions capable of being retained in pumpable fluid states for long time periods and then activated to set into hard masses (see col. 1, line 51-54). The composition is a hydraulic cement, such as Portland cement (col. 8, I, 65 et seq.) and a hydratable gel forming material, such as polyvinyl alcohol (col. 6, I, 54-56). A methylene-phosphonic acid derivative is used as a set delaying agent (see col. 6, I, 62 et seq.). However, Childs only describes liquid cement compositions. Contrary thereto, the present invention relates to a pulverulent building material composition. As can be seen, Childs et al. describe completely different compositions and do not anticipate the subject-matter of the present application.

Berke et al. (US 2003/0089281 A1 corresponding to US 6,648,962)

Berke et al. do not describe a coating of a reactive support material (not yet hydrated) with a liquid polymer to achieve a delayed curing action. Rather, Berke et al. describe hydrated cured cement which are comminuted and then exposed to additives into Portland cement. See parag. 0067. Berke et al. describe so-called bonding admixtures (see col. 7, I, 17-21 of US 6,648,962). These bonding admixtures are additives which increase the bond strength between old and new concrete.

Gray (US 2007/0056480 A1)

Gray does not describe a dry pulverulent material. Rather, Gray describes particulates in a flowable aqueous liquid.

Gray describes flowable concrete mixtures (see col. 1 [0003]) comprise a hydraulic cement, viscosity modifying agents and water (see claim 1). Since the flowable concrete mixtures of Gray comprise water, they are liquid concrete mixtures. Thus, the pulverulent building material composition according to the pending claims of the present application is not anticipated by Gray. Moreover, Gray does not contain any hint to a possible delayed action.

Muller (US 7,442,249)

Muller discloses aqueous cement compositions which optionally can include polyvinyl alcohol useful in oil and gas wells. Muller does not describe a coated pulverulent building material composition having a delayed curing action.

Wallner (US 2004/0126602 corresponding to US 7,407,545)

Wallner does not describe a removably coated pulverulent. See paragraphs 29 – 31. Rather, Wallner describes cementitious veneer and laminate material (see Abstract). In a preferred embodiment the cementitious laminate material comprises three layers (see col. 3, I. 63-66). The primer layer thereby comprises a mixture of polyvinyl alcohol (PVA) catalyst, Portland cement and resin-coated sand (see col. 4, I. 45-47). The compound polyvinyl alcohol, described as polyvinyl alcohol (PVA) catalyst, shows that Wallner uses this compound to achieve a faster hardening of the cement particles and additives. Thus, PVA is used for a completely different purpose in Wallner than in the present invention, where it is used in a building material composition having a delayed curing action. Thus, Wallner does not either describe the subject-matter of the present invention, but rather leads away from it.

Symons (US 6,488,761)

As intermediate product (see col. 2 below to col. 3 above) Symons achieves a paste of hydraulic binder mixed with water or a solution of water and polyvinyl alcohol. This paste, however, is no pulverulent building material composition. Symons is directed to a hardened foamed product and a method of making a composite product including the steps of mixing together finely divided lignocellulose fibres, a hydraulic binder and water optionally containing a polyvinyl alcohol to form a paste and foaming of the paste to form a foamed product. Thus, Symons only describes hydraulic cured foamed products, however, no pulverulent building

material compositions as claimed in the present application are described or suggested.

Cowan et al. (US 5,020,598)

Cowan et al. do not disclose polyvinyl alcohol, but rather only slurries of a poly alcohol with cement where there is no removal of the alcohol. Cowan et al. disclose cement compositions and processes for cementing a well. The compositions as described comprise water, a hydraulic cement and an additive for improvement of bonding and sealing of cement to adjacent surfaces. Suitable additives are polyalcohols (see col. 4, I. 33 to col.5, I. 3). Polyvinyl alcohol is not mentioned in Cowan et al. A pulverulent composition having a delayed curing action is neither described nor envisaged by Cowan et al.

Adams et al. (US 4, 053,323)

Adams et al. do not hint of coating a pulverulent. Adams et al. describe aqueous hydraulic cement compositions containing polyamido-sulfonic compounds as flow-property-improving and turbulence-inducing additives. Adams et al. do not hint of a coated pulverulent building material and even less to such compositions, having a delayed action.

Cattanach (US 3,615,784)

Cattanach does not describe a pulverulent material, but rather mixing hydrolyzed casein, poly oxy surfactant, and polyvinyl alcohol into cement as the cement is being mixed. The polyvinyl alcohol is mentioned, but it is described as a fluid-loss control agent (see col. 6, I. 27-32). Cattanach discloses a composition for producing air-entrained concrete or normal concrete. The compositions comprise Portland cement and a solution of polyvinyl alcohol in water. The compositions disclosed in Cattanach are cement slurries and not pulverulent compositions.

Clark et al. (US 2,803,555)

Clark et al. describe improvements in cement slurries which are used in oil fields for the purpose of cementing or filling the space in a well between the casing and the surrounding formation (see col. 1, 1.16-19). The cement slurries comprise Portland cement, water and a pore sealer. A possible pore sealer mentioned is polyvinyl alcohol (see col. 4, I. 46-49). Thus, Clark et al. do not describe a pulverulent building material composition but rather a cement slurry. Polyvinyl alcohol is only mentioned as pore sealer, but not as coating material and even less as coating material conferring a delayed curing action to a building material composition.

Ludwig (US 2,576,955)

Ludwig discloses low-water-loss cement, low-water-loss cement slurries and methods of making such slurries (see col. 1, 1.4-6). The cement consists of a hydraulic cement with the addition of powdered polyvinyl alcohol (see col. 2, 1.21-26). An addition of the polyvinyl alcohol as liquid polymer compound as in the present invention and coating a pulverulent with a liquid is not described in Ludwig. Thus, Ludwig does not describe the coating of a reactive support material with PVA, nor does Ludwig does not describe a delayed action.

Schutt (US 6,432,191) and Standke et al. (US 6,685,766)

Schutt and Standke et al. disclose silane-based compositions for the coating of surfaces (Schutt) as well as corrosion inhibitors for steel-reinforced concrete (Standke et al.). In both cases the compositions are coated onto already existing cement structures. There is no connection to the particulate, pulverulent material compositions of the present application.

Mosquet et al. (US 2005/0223948)

Mosquet et al. disclose compositions intended to be applied to surfaces of freshly poured mortar and/or concrete mixes before the start of setting, to prevent evaporation of water needed for the setting. Mosquet et al.'s compositions are aqueous emulsions of at least one paraffin wax, at least one hydrocarbon oil and at least one oil formed from an ester (see Abstract). Mosquet et al. neither disclose the use of Portland cement nor the use of polyvinyl alcohol, nor a pulverulent building material composition according to the present invention.

Shoshany et al. (US 2006/0225623)

Shoshany et al. describe adding wax compositions aqueous concrete mixtures to to control, reduce and eliminate efflorescence in concrete shaped products (see page 1, [0001] and page 2 [0026]). Shoshany thus neither describes pulverulent building material compositions nor compositions having a delayed curing action.

V. Conclusion - The References Do Not Describe A Coated Pulverulent Material Where The Coating Is Removable and The Coated Pulverulent Can Be Sieved.

The references do not describe a coated particulate pulverulent which is removably coated with a material that delays the curing reaction of the active support. Nor do the references describe any motivation for any combination to solve the problem and achieve the results described by the applicants. Reconsideration and allowance of the pending claims is respectfully requested.

Application No. 10/551,742

AMENDMENT

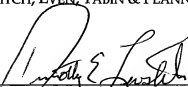
Reply to Office Action dated August 14, 2009

The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 06-1135.

Respectfully submitted,

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